

CLAIMS

1. A dry powder for inhalation comprising active particles and carrier particles for supporting active particles, the formulation further containing magnesium stearate in an amount of at least 0.5% by weight of the formulation, and wherein particles of magnesium stearate are disposed on the surface of the carrier particles such that the surface coverage of carrier particles is less than 10%.

10 2. A dry powder according to claim 1 wherein the surface coverage of carrier particles is from 1 to 5%.

3. A dry powder according to claim 1 or claim 2 wherein the magnesium stearate is present in amounts of 0.5 to 2% by weight.

15 4. A dry powder according to any of the preceding claims wherein the magnesium stearate is present in amounts of from 0.6 to 1% by weight.

20 5. A dry powder according to any of the preceding claims wherein the active substance is selected from beta-mimetics selected from Levalbuterol, Terbutalin, Reproterol, Salbutamol, Salmeterol, Formoterol, Fenoterol, Clenbuterol, Bambuterol, Tulobuterol, Broxaterol, Epinephrin, Isoprenaline or Hexoprenaline; Anticholinergic selected from Tiotropium, Ipratropium, Oxitropium or Glycopyrronium; Corticosteroids, selected from Butixocart, Rofleponide, Budesonide, Ciclosenide, 25 Mometasone, Fluticasone, Beclomethasone, Loteprednol or Triamcinolone; Leukotrienantagonists, selected from Andolast, Iralukast, Pranlukast, Imitrodast, Seratrodast, Zileuton, Zafirlukast or Montelukast; Phosphodiesterase-Inhibitors, selected from Filaminast or Piclamilast; PAF-Inhibitors, selected from Apafant, Forapafant or Israpafant; potassium channel opener selected from Amiloride or 30 Furosemide; analgesics (pain killers) selected from Morphine, Fentanyl, Pentazocine, Buprenorphine, Pethidine, Tilidine, Methadone or Heroin; potency agents selected from Sildenafil, Alprostadil or Phentolamine; pharmaceutically acceptable derivative

or salt of any of the foregoing compounds or classes of compounds; and macromolecules selected from proteins, peptides, oligopeptides, polypeptides, polyamino acids, nucleic acids, polynucleotides, oligo-nucleotides and high molecular weight polysaccharides.

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6. A dry powder according to any of the preceding claims wherein the carrier material is selected from a mono- or di-saccharides such as glucose, lactose, lactose mono-hydrate, sucrose or trehalose; sugar alcohols such as mannitol or xylitol; polylactic acid; or mixtures thereof.

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7. A dry powder according to any of the preceding claims wherein the carrier is lactose mono-hydrate.

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8. A method of making a dry powder for inhalation comprising the step of blending magnesium stearate with a carrier material in a diffusion blender for a period of less than 30 minutes.

9. A method of making a dry powder consisting of the consecutive steps of:-

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- (i) magnesium stearate with a carrier material in a diffusion blender for a period of less than 30 minutes,
- (ii) blending the mixture of step (i) with an active substance in a diffusion blender for a period of less than 30 minutes.

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10. A multi-dose dry powder inhaler containing a formulation as defined in any of the claims 1 to 7.